

ABSTRACT

A gas sensor capable of reversibly and continuously measuring the concentration of a catalyst poison gas such as CO without specially needing recovering means such as a heater, and measuring the catalyst poison gas concentration without being affected by H_2O concentration. The electrical circuit (15) of the gas sensor has an AC power supply (19) for applying an AC voltage between both electrodes (3), (5), an AC voltmeter (21) for measuring an AC voltage (AC effective voltage V) between the both electrodes (3), (5), and an AC ammeter (23) for measuring a current (AC effective current I) running between the both electrodes (3), (5). An impedance is determined from the AC effective voltage V and the AC effective current I generated when the AC voltage is applied to the both electrodes (3), (5). Since this impedance corresponds to the catalyst poison gas concentration, the catalyst poison gas concentration can be determined from the impedance by using a map showing the relation between the impedance and the catalyst poison gas concentration.